CHES STUDIES

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DIABETES SURVEILLANCE: DIABETES MORTALITY IN NORTH CAROLINA FROM 1980 THROUGH 1989

by

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ABSTRACT

North Carolina resident death certificate data for 1980 through 1989 were used to draw conclusions regarding (1) the roles of age, race, and sex in diabetes-related mortality and (2) recent temporal trends.

The number of deaths, crude mortality rate, and age-adjusted mortality rate in the general population all increased from 1980 through 1989. Nonwhite females had the highest of the race/sex-specific rates, although the increase for nonwhite males was the greatest over the period. After adjustments for age, neither white males nor white females demonstrated a significant trend. However, age adjustments exacerbated the increase for nonwhite males relative to other race/sex groups (although the rate for nonwhite females was still considerably higher than that for nonwhite males).

In contrast, age-adjusted mortality rates within the diabetic population revealed that nonwhite male diabetics had the greatest risk of dying from a diabetes-related cause. Moreover, that risk increased over 16 percent from 1980 through 1987. The rate for white male diabetics declined 24 percent, taking them from the highest race/sex-specific diabetes-related mortality risk in 1980 to the third highest by 1987. The age-adjusted rate for nonwhite females with diabetes rose nearly 16 percent from 1980 so that by 1987 nonwhite female diabetics exhibited the second highest risk of a diabetes-related death. The diabetes-related mortality rate for white female diabetics was the lowest of the race/sex-specific rates each year from 1980 to 1987.

Overall, age-adjusted diabetes mortality within the diabetic population remained essentially unchanged over the 1980-1987 period. This may suggest that the increase in diabetes mortality in the general population is due to increases in prevalence or diagnosis rather than to increased risk that diabetics will die from their disease.

High crude diabetes-related mortality rates for 1980 through 1989 were particularly evident in northeastern North Carolina, with most of the high rates occurring in counties within DEHNR Regions IV and VI. Overall rates were higher all along the eastern part of the state after age-adjusting, with additional pockets of high rates scattered throughout the west. For both crude and age-adjusted rates by race, highly significant clustering ($p<=.01$) was found in many of the northeastern counties for whites and in some western counties for nonwhites.

Differences were found between diagnoses mentioned on the death certificates of all decedents and diagnoses mentioned in conjunction with diabetes. Persons with diabetes suffer daily from the afflictions imposed by chronic heart, circulatory, and kidney diseases. Diabetics with a mention of diabetes on their death certificate also died more frequently from these diseases.